



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,061	10/24/2003	Idan Avraham	MSFT-2818/305956.01	3378
41505 7590 12/12/2007 WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION) CIRA CENTRE, 12TH FLOOR 2929 ARCH STREET PHILADELPHIA, PA 19104-2891			EXAMINER GYORFI, THOMAS A	
			ART UNIT 2135	PAPER NUMBER
			MAIL DATE 12/12/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/693,061

Applicant(s)

AVRAHAM ET AL.

Examiner

Tom Gyorfi

Art Unit

2135

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-17, 19-30 and 32-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-17, 19-30, and 32-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-3, 5-17, 19-30, and 32-45 remain for examination. The correspondence filed 10/2/07 amended claims 1, 15, 29, and 42.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/2/07 has been entered.

Response to Arguments

3. Applicant's arguments with respect to claims 1-45 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
5. Any statements of Official Notice made in the previous Office Action that were not traversed by the Applicant in the amendment of 10/2/07 have now been taken as admissions of prior art, as permitted by MPEP 2144.03(C)

6. Claims 1-3, 5-13, 15-17, 19-27, 29, 30, 32-40, 44, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boebert (U.S. Patent 5,822,435), and further in view of "Tom's Hardware Guide: Nuts and Bolts of Notebooks" (hereinafter, "Tom").

Regarding claims 1, 15, and 29:

Boebert discloses a method, computer-readable medium, and trusted user interface engine comprising: accepting user input from a trusted user input device (col. 5, lines 44-51); determining whether said secured execution environment is in a standard input mode (col. 5, lines 15-30); and directing the flow of user input based on the input mode of the secured execution environment including if said secured execution environment is in a standard input mode, transferring at least a portion of said user input to said second execution environment (col. 6, lines 40-60); determining whether said user input comprises a user NIM indication that said secured execution environment should be in a nexus input mode (col. 6, lines 1-10); and if said user input comprises said user NIM indication and said secured execution environment is not in said nexus input mode, switching said secured execution environment to said nexus input mode (col. 5, 27-32).

Although Boebert discloses multiple alternatives for the user NIM indication to be the way that one transitions from standard input mode to nexus input mode (col. 6, lines 1-10), note that these are *separate* embodiments, and thus instances of the Boebert invention exists wherein exactly one of those means is the only way to initiate the transition. However, Boebert does not explicitly disclose wherein there are at least two

ways to transition from secured mode to standard mode. It is now taken as Applicant admitted prior art that in prior art systems teaching a secure mode of operation, one can transition out of secure mode either by an explicit logout command, or by simply remaining idle for a set period of time (pursuant to MPEP 2144.03 see the "sshd" reference as an example, including pages 1 and 4 as indicated). In the case where the secure mode is terminated by an idle timeout, one of ordinary skill in the art at the time the invention would have recognized that this is an asymmetric transition mode, as Examiner knows of no system that would log a user into a computer, or a secure mode of said computer, simply by remaining idle for a period of time. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include an idle timeout mechanism in addition to whatever manual mode of transition would already be present in the Boebert invention, to keep the computer secure (cf. Boebert, col. 3, lines 10-15).

Although Boebert discloses a keyboard separate from the workstation, it is well known that notebook computers existed wherein the keyboard is encompassed within the computer, and furthermore at least some notebook computers were designed with the explicit purpose to replace desktop workstations (Tom, "Segment #3: Meganote"). Accordingly the claim would have been obvious because the substitution of one known element for another (the notebook with integrated keyboard in lieu of the separate workstation and keyboard devices) would have yielded predictable results to one of ordinary skill in the art at the time the invention was made.

Regarding claims 2 and 16:

Boebert further discloses decrypting said user input (col. 4, lines 25-30).

Regarding claims 3, 17, and 30:

Boebert further discloses if said secured execution environment is in a nexus input mode, determining a specific process running in said secured execution environment to which said user input is directed (col. 7, lines 13-27); and directing said user input to said specific process (Ibid).

Regarding claims 4, 18, and 31:

Boebert further discloses determining whether said user input comprises a user NIM indication that said secured execution environment should be in a nexus input mode (col. 6, lines 1-10); and if said user input comprises said user NIM indication and said secured execution environment is not in said nexus input mode, switching said secured execution environment to said nexus input mode (col. 5, lines 27-32).

Regarding claims 5, 19, and 32:

Boebert further discloses where said NIM indication comprises a combination of keystrokes on a keyboard (col. 6, lines 1-5).

Regarding claims 6, 20, and 33:

Boebert further discloses where said NIM indication comprises a programmatic activation of a process running in said secured execution environment (e.g. the electronic mail function initiating the trusted mode, col. 7, lines 50-60).

Regarding claims 7, 21, and 34:

Boebert further discloses selecting a graphical user interface element corresponding to said process (col. 6, lines 50-60).

Regarding claims 8, 22, and 35:

Boebert further discloses wherein said graphical user interface element is a shadow graphical user interface element displayed using a second process, where said process is running on said second execution environment, and where said shadow graphical user interface element corresponds to a secured graphical user interface element displayed by said first process (Ibid; col. 5, lines 33-43; col. 8, lines 45-50).

Regarding claims 9, 23, and 36:

Although Boebert discloses determining if the user input indicates switching from the standard user input mode to the nexus [trusted] input mode (see the rationale of rejection for claims 4, 18, and 31 above), Boebert does not explicitly disclose the reverse process. It would have been immediately obvious to one of ordinary skill in the art at the time the invention was made to switch from nexus to standard input modes via

at least one of the same mechanism(s) provided for the switch from standard to nexus modes. One would do so because failure to provide a means to terminate the trusted input mode would allow subsequent users of the computer system to masquerade as the original authenticated user, thereby defeating the security of the disclosed system (see also col. 2, lines 55-65).

Regarding claims 10, 24, and 37:

Boebert further suggests where said user SIM indication comprises a combination of keystrokes on a keyboard (col. 6, lines 1-5).

Regarding claims 11, 25, and 38:

Boebert further suggests where said user SIM indication comprises an action which results in a display with no graphical user interface element which corresponds to a process running on said secured execution environment (VT100s being known in the art as having no graphical user interface, col. 6, lines 50-55).

Regarding claims 12, 26, and 39:

Boebert further discloses where if said secured execution environment is in a standard input mode, and a second portion of said user input corresponds to changes to a graphical user interface element displayed by a process running on said secured execution environment, said changes to said graphical user interface element are

performed within said secured execution environment (X-Windows, col. 6, lines 50-60; see also col. 7, lines 30-39).

Regarding claims 13, 27, and 40:

Boebert further discloses where said changes to a graphical user interface element displayed by a process running on said execution environment comprise the movement of a mouse cursor over a graphical user interface element displayed by a process running on said secured execution environment (inherent to X-Windows, see col. 6, lines 50-60).

Regarding claim 44:

Boebert discloses a computer readable medium comprising: maintaining a current state for said secured execution environment selected from among a group of possible states comprising: a standard input mode and a nexus input mode state (elements 37 and 38 of Figures 3 and 4; col. 5, lines 20-30); and directing flow of user input according to said current state (col. 5, lines 15-50). Applicant is referred to pages 3 & 4 of this Action regarding the general obviousness of the new limitation of this claim.

Regarding claim 45:

Boebert further discloses limiting a transfer of said user input to said second execution environment when said current state is said nexus input mode state (col. 5, lines 44-51).

7. Claims 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boebert, in view of "Meeting Critical Security Objectives with Security-Enhanced Linux" (hereinafter, "Loscocco").

Regarding claim 42:

Boebert discloses a method comprising: maintaining a current state for said secured execution environment selected from among a group of possible states comprising: a standard input mode and a nexus input mode state (elements 37 and 38 of Figures 3 and 4; col. 5, lines 20-30); and directing flow of user input according to said current state (col. 5, lines 15-50). It is further observed that the Boebert invention is preferably run on a Unix-based computer running X-Windows (col. 4, lines 35-45) and that separate windows within the X-Windows system act as independent execution environments, allowing for one window to be construed as a [more] secure environment compared to others simultaneously running (col. 6, lines 45-60). Boebert does not, however, wherein said Unix system employs a secure kernel. Nevertheless, the use of secure kernels to control Unix-based computers has been well known in the art, as disclosed by Loscocco (page 2, 1st column, last paragraph; cf. sections 3.4 and 3.5 regarding process controls). It would have been obvious to one of ordinary skill in the art to use a secure kernel to manage a secured execution environment and a second execution environment. The motivation for doing so would be to minimize the threat of tampering and bypassing application security mechanisms and confine the damage that could be caused by malicious or flawed applications (Loscocco, Abstract).

Regarding claim 43:

Boebert further discloses limiting a transfer of said user input to said second execution environment when said current state is said nexus input mode state (col. 5, lines 44-51).

8. Claims 14, 28, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boebert in view of Tom as applied to claims 1, 15, and 29 above, and further in view of Hwang (U.S. Patent 6,121,962).

Regarding claims 14, 28, and 41:

Neither Boebert nor Tom explicitly disclose switching said execution environment to a nexus input mode if a power management change is detected. However, Hwang discloses this limitation (col. 3, lines 25-40). It would have been obvious to one of ordinary skill in the art at the time the invention was made to switch into a secure input mode when a power management change, such as powering up from a suspended state, is made. The motivation for doing so would be to protect confidential data against unauthorized users (Hwang, col. 3, lines 10; see also Boebert, col. 3, lines 10-15).

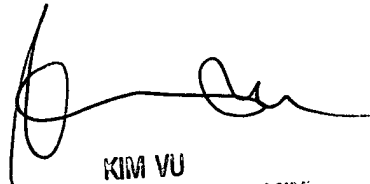
Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom Gyorfi whose telephone number is (571) 272-3849. The examiner can normally be reached on 8:30am - 5:00pm Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on (571) 272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TAG
11/30/07


KIM VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100